Proposed Plan Fact Sheet

Star Lake Canal Superfund Site
Port Neches, Jefferson County, Texas **June 2013**

United States Environmental Protection Agency

This Fact Sheet will tell you about…

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- How to Participate
- Site Risks
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Proposed Cleanup Plan

The U.S. Environmental Protection Agency, Region 6 (EPA) announces the Proposed Plan for the Star Lake Canal Superfund site (Site), located near Port Neches, Texas. The Site includes two industrial canals (Star Lake Canal and Jefferson Canal) and adjacent wetlands. Molasses Bayou is located southeast of the Star Lake Canal and intersects the canal at two locations. The Gulf States Utility Canal is a canal that was excavated during the placement of a utility line and is located approximately 100 feet northwest of the Star Lake Canal. The Gulf States Utility Canal extends parallel to the Star Lake Canal from northeast of Atlantic Road to the Neches River.

The Proposed Plan evaluates a number of alternatives and identifies the actions that EPA believes are the best way to protect human health and the environment. The following actions will address contamination at seven areas of the Site that warrant cleanup under the Superfund law:

- **Jefferson Canal**

Partial 12-inch Removal/Disposal and Containment:

This alternative requires a 12-inch excavation of material from portions of Jefferson Canal. Following excavation, a 12-inch soil cap will be placed on the area outside of the pipeline servitude; and a 12-inch erosion control mat will be placed on the pipeline servitude.

- **Jefferson Canal Spoil Pile**

Removal/Disposal of mounds to grade and Containment with a two-foot Composite Cap:

This alternative removes the spoil pile mounds to grade of the existing contour and includes placement of a composite cap to contain soil contaminants below the cap.

- **Former Star Lake**

Partial 12-inch Removal/Disposal and Containment:

This alternative requires a 12-inch excavation of material from portions of the Former Star Lake. Following excavation, a 12-inch impermeable clay cap will be placed on the area outside the pipeline servitude. Inside the pipeline servitude, a 12-inch erosion control mat or a 12-inch composite cap will be placed depending on whether the area is on the banks of Star Lake Canal.

- **Star Lake Canal**

Removal/Disposal and a 12-inch Impermeable Cap:

This alternative requires a 12-inch excavation of portions of Star Lake Canal. Following excavation, a 12-inch impermeable cap will be placed to provide a barrier between contaminated sediment and benthic invertebrates. The hydraulic capacity of the canal will not be modified.

- **Gulf States Utility Canal**

Containment with a 12-inch Composite Cap:

This alternative uses a composite cap to prevent erosion of the soft canal bottom and provide a new benthic habitat.

- **Molasses Bayou Waterway**

Monitored Natural Recovery (MNR), 12-inch Removal/Disposal, and a 12-inch Armored Cap:

This alternative uses MNR combined with removal, disposal, and capping of sediment in portions of the waterway that can be reached.

- **Molasses Bayou Wetland**

Monitored Natural Recovery (MNR) and a 12-inch Cap:

This alternative uses MNR combined with capping of the wetland areas that are accessible from Molasses Bayou.

How to Participate

EPA and the Texas Commission on Environmental Quality (TCEQ) invite public comment on the plans for cleaning up this Site. We are providing a variety of ways for you to comment on the Proposed Plan, learn more about the project, and get involved.

Attend the Public Meeting

To help you understand and comment on this Proposed Plan, EPA will host a public meeting. At the meeting,

we will discuss the contents of the plan, help you understand the cleanup alternatives, and answer questions. A court reporter will prepare a transcript of the meeting that will be made available to the public.

THE PUBLIC MEETING WILL BE HELD:

July 11, 2013 * 6:00 p.m. – 8:00 p.m.
Effie & Wilton Hebert Public Library
2025 Merriman Street
Port Neches, TX 77651
409.722.4554
This meeting is being held in a fully accessible facility.

Provide Comments to EPA

Your comments will help EPA make final decisions about the cleanup, and they may result in a final cleanup plan that differs from this one. The final cleanup plan (or "selected remedy") will appear in a document called a Record of Decision (ROD), which is expected to be completed in 2013. A 30-day public comment period begins June 21, 2013, and ends July 20, 2013.

Written comments on the Proposed Plan or other material in the Administrative Record file must be postmarked by July 20, 2013. Send comments to Gary Miller, Remedial Project Manager, U.S. EPA Region 6, 1445 Ross Avenue, Dallas, Texas 75202-2733 – email miller.garyg@epa.gov. A summary of the comments received, along with how those comments changed the decision that was reached, will be documented in the ROD.

Site Risks

A Human Health Risk Assessment (HHRA) and a Baseline Ecological Risk Assessment (BERA) were conducted to evaluate the current and future effects of contaminants found in soil, sediment, surface water and biota on human and ecological receptors. During the Remedial Investigation (RI), a total of 65 surface water samples, 258 sediment samples, and 108 soil samples were collected. In addition to this, 40 fish tissue samples were collected for the HHRA and 70 tissue samples were collected for the BERA. The risk assessments were conducted in a two-tier process. The first tier served as a screening level risk evaluation and to guide a more site-specific and comprehensive risk assessment in the second tier. The results for the first tier are presented in the Tier One RI Report and the results of the second tier are presented in the Final Tier Two RI Report. Following the completion of the RI, an Alignment Document and a Sensitivity Analysis were developed to facilitate the completion of the Feasibility Study (FS). The results of the sensitivity analysis are presented in the Final FS Report.

During the RI, seven Areas of Investigation (AOIs) were established. This was done because of the size of the site, the different habitat types, to simplify the sampling design, and to simplify the decision-making process. For some animals that are higher in the food chain and have a large home range, the data from the entire site was used to calculate risk. For receptors with a limited range, the risk was calculated on an AOI basis or using data from individual sample locations. After completion of the RI the AOIs were divided again using a sub-area approach. Individual sub-areas were identified where the risk to benthic invertebrates was determined to be medium-high or high.

Human Health Risk

The HHRA focused on the potential for human health effects from exposure to contaminants at the site from recreational swimming and wading, recreational fishing, trespass wading, and industrial worker.

The potential human health risk from groundwater was not considered in the human health risk assessment because Huntsman is currently conducting a groundwater corrective action monitoring program at the adjacent Huntsman PNPP facility under TCEQ's Corrective Action Program.

The HHRA indicated that the potential human health risk from the site is low and does not pose an unacceptable risk for human receptors that may use the site. The calculated non-carcinogen Hazard Indices (HI) for all human receptors were below the level of 1, which indicates that non-cancer health effects are unlikely to occur.

The cancer risk from exposure to a chemical is described in terms of the probability that an individual may develop cancer because of a lifetime of exposure (i.e., 70 years). The calculated cancer risk for all receptor scenarios at the Star Lake Canal Site is less than 1 chance in 100,000 or (1×10^{-5}). The primary risk driver is consumption of fish and shellfish caught at the site. As the site is primarily an industrial site with limited access for fishing by the general public, it was determined that the cancer risk is acceptable. Therefore, no Remedial Action Objectives (RAOs) were needed or developed for the protection of human health.

Ecological Risk

The BERA focused on the potential for ecological receptors to be harmed by exposure to contaminants in

soil, surface water, sediment and biota. The ecological receptors included aquatic, benthic, and terrestrial invertebrates. Also included were fish and upper trophic level receptors such as the bullfrog, painted turtle, mallard, marsh wren, spotted sandpiper, raccoon and short-tailed shrew. The BERA indicated that sediment presents an unacceptable risk to benthic invertebrates and to animals higher in the food chain at the site. The risk assessment also showed that the Jefferson Canal Spoil Pile soil presents an unacceptable risk to animals higher in the food chain. Therefore, Remedial Action Objectives (RAOs) were developed for benthic invertebrates and animals higher in the food chain exposed to sediment. RAOs were also established for receptors exposed to soil at the Jefferson Canal Spoil Pile.

The first tier of the ecological risk assessment is called a Screening Level Ecological Risk Assessment (SLERA). The results of the SLERA are presented in the Tier One RI Report. The primary goal of the SLERA is to produce a list of potential contaminants and to define the nature and extent of the contamination. The second tier of the risk assessment is called the baseline ecological risk assessment or BERA. The BERA used a weight of evidence approach where multiple methods of evaluating toxicity were used.

The BERA found that the results from these multiple methods were in agreement that sediment presents an unacceptable risk to the environment.

The sensitivity analysis showed that if all sub-areas with a score of 3 (medium high priority) or 4 (high priority), along with the Jefferson Canal spoil pile are remediated to the established Preliminary Remediation Goal (PRG) values, then the site risks would be acceptable.

Cleanup Goals

Several cleanup goals have been developed for each of the seven areas that will be addressed by EPA's proposed cleanup plan. A summary of these goals are:

- Protect benthic invertebrates by reducing direct contact exposure with contaminants in areas where sediment is designated as having medium-high or high risks.
- Protect animals higher in the food chain by reducing ingestion/direct contact with sediment concentrations in excess of the PRGs in areas where sediment is designated as having medium-high or high risks.
- Protect animals higher in the food chain by reducing or eliminating exposure to contaminants in soil from the Jefferson Canal Spoil Pile.

Where to get more information

You can see a copy of the Proposed Plan, which describes the cleanup alternatives EPA studied, and also get more information about the Site by visiting the Administrative Record file which can be found at:

Port Neches
Effie & Wilton Hebert Public Library
2025 Merriman Street
Port Neches, TX 77651
409.722.4554

Texas Commission on Environmental Quality
12100 Park 35 Circle Bldg. E
Austin, TX 78753
512.239.2920 If you have questions or need additional information, contact:

Gary Miller, Remedial Project Manager
U. S. Environmental Protection Agency
214.665.8318 or 1.800.533.3508 (Toll-free)

Phillip Winsor, State Project Manager
Texas Commission on Environmental Quality
512.239.1054 or 1.800.633.9393

Bill Little, Region 6 Community Involvement Coordinator/SEE
U.S. Environmental Protection Agency
214.665.8131 or 1.800.533.3508 (Toll-free)

For press inquiries, please call the EPA Region 6 Press Office, at 214.665.2200.

You can find more information about the Region 6 Superfund program and the Star Lake Canal Site on EPA's Region 6 website:

http://www.epa.gov/region6//6sf/6sf.htm or http://www.epa.gov/region6/6sf/pdffiles/star-lake-canal-tx.pdf

To receive a Spanish translation of this fact sheet call U.S. EPA at 1.800.533.3508 (toll-free).

Para recibir una traducción en español de esta hoja de datos, comunicarse con la Agencia de Protección del Medio Ambiente de los EEUU (la EPA) al número de teléfono 1.800.533.3508 (llamada gratis).

United States
Environmental Protection
Agency

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1445 Ross Ave. (6SF-VO)
Dallas, TX 75202